

Remarks

This Response is considered fully responsive to the Final Office Action mailed May 27, 2009. Claims 4-6, 11, and 12 are pending in the application and stand rejected. In this Response, claims 4 and 12 have been amended. No claims have been cancelled or added. Claims 4-6, 11, and 12 are now pending in the application. Reexamination and reconsideration are respectfully requested.

Objections to the Specification

The Specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Office alleges that the claims, as amended, employ terminology that is not found in the Specification. The Office has identified the terms “transverse feed manifold” and “elongated hollow central portions,” which appeared in the originally filed claims. Specifically, these terms appeared in originally file claim 4 (Applicant note that the term “elongate hollow central portions” was amended to recite “elongated hollow central portions” ONLY to improve the form of the claims. Applicant respectfully refers the Office to MPEP 608.01(l), which states:

In establishing a disclosure, applicant may rely not only on the description and drawing as filed but also on the original claims if their content justifies it.

Further, Applicant respectfully notes that MPEP 608.01(o), which was cited by the Office, does not require that every term that appears in the claims be explicitly used in the Specification. Rather, it states that “[T]he meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification with clear disclosure as to its import.” Nonetheless, Applicant has amended the Specification to include these terms. Applicant respectfully notes that support for these amendments can be found in originally filed Claim 4.

Further, the Office alleges that there is inconsistency and lack of clarity in the numbering and description of the features shown in the drawings. In view of the amendments made herein, Applicant respectfully submits that these inconsistencies have been addressed. Applicant has amended reference numeral 22 to consistently refer to hollow plates.

Applicant respectfully notes that the Specification was previously amended to clarify that reference numerals 24 and 26 refer to semi-frustra with hollow walls. Further, with respect to reference numeral 28, Applicant notes that reference numeral 28 is used in the Specification to refer only to a connection branch.

Accordingly, Applicant respectfully submits that the Specification provides proper antecedent basis for the claimed subject matter, and that the numbering and description of the features shown in the drawings are consistent and clear. Applicant respectfully requests withdrawal of the objection to the Specification.

Rejections Under 35 U.S.C. § 112

Claim 12 stands rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office alleges that claim 12 is “fundamentally ambiguous” in that it is not clear what the recitation of a “plurality of stacked pairs of hollow plates . . . each hollow plate of a pair extending in opposition to the other hollow plate of the pair from the internal common channel” is referring to. The Office further alleges that there is no support for this feature in the originally filed disclosure. Applicant respectfully disagrees. However, in the interest of compact prosecution, Applicant has amended claim 12 to clarify the ambiguities alleged by the Office. Support for the amendments to claim 12 can be found throughout the originally filed Specification, at least in FIGS. 2 and 3 and the related description. In view of the amendments to claim 12, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 12 under 35 U.S.C. § 112, first paragraph.

Claims 4-6 stand rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim what the applicant regards as his invention. Specifically, the Office has alleged that there is no antecedent basis for the term “channel common to all plates.” Applicant has amended claim 4 to provide antecedent basis for the channel common to all plates.

The Office has also alleged that the relationship between the “hollow plates,” the “elementary conduits,” the “hollow end connectors,” and the “transverse feed manifolds” of claim 4 is not clear. Further, the Office alleges that the recitation “hollow plate” is unclear. Applicant respectfully disagrees but, in the interest of compact prosecution, have amended claim

4 to clarify the structure of claim 4. As recited in claim 4, the a stack of hollow plates is formed by compression of an accordion-shaped polymer preform produced by thermo-blowing and having biconvex bellows. This compression can be seen in FIGS. 2 and 3 of the present application. Thus, when the accordion-shaped polymer preform is compressed, a stack of hollow plates is formed. Because the walls of accordion-shaped polymer preform have a thickness (and internal and external faces), when the preform is compressed, the internal faces of the walls form elementary conduits of the heat exchanger.

In view of Applicant's amendments to independent claim 4, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 4-6 and 12 under 35 U.S.C. § 112, second paragraph.

Claim 12 also stands rejected under 35 U.S.C. § 112, second paragraph. In view of the amendments to claim 12, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 12 under 35 U.S.C. § 112, second paragraph.

Rejection Under 35 U.S.C. § 102

Claims 11 and 12 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,837,685 to Miller. All rejections are respectfully traversed for at least the following reasons.

Claims 11 and 12 are directed to a heat exchanger that includes at least one single piece heat exchange element forming a heat exchange surface from a accordion-shaped, single piece, compressed preform produced by thermo-blowing and having biconvex bellows, wherein the at least one single piece heat exchange element internally forms a first confined fluid passage. Applicant respectfully notes that, as illustrated in at least FIGS. 2 and 3, the first confined fluid passage is formed by the interior walls of the preform as a result of compression. Applicant respectfully submits that Miller does not disclose or suggest a heat exchanger, nor does Miller disclose or suggest a heat exchange surface formed from an accordion-shaped, single piece, compressed preform produced by thermo-blowing and having biconvex bellows, where the heat exchange element internally forms a first confined fluid passage. Further, Miller does not disclose or suggest a plurality of stacked pairs of hollow plates communicating through an internal common channel, as recited in amended claim 12. Accordingly, Miller cannot anticipate claims 11 and 12.

As the Office has failed to establish a *prima facie* case of anticipation with respect to claims 11 and 12, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 11 and 12. Allowance of the claims is respectfully requested.

Rejections Under 35 U.S.C. § 103

Claim 4 stands rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,423,269 to Gremel in view of U.S. Patent No. 4,585,056 to Oscarsson and U.S. Patent No. 3,575,318 to Kunz. All rejections are respectfully traversed for at least the following reasons.

Applicant respectfully submits that the Office has failed to establish a *prima facie* case of obviousness with respect to claim 4 because the Office has not considered all of the features of claim 4. When determining whether a claim is obvious, an examiner must make “a searching comparison of the claimed invention – **including all its limitations** – with the teaching of the prior art.” *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis added). Thus, “obviousness requires a suggestion of all limitations in a claim.” CFMT, Inc. v. Yieldup Intern. Corp., 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). The rejection of claim 4, however, fails to substantively address **ANY** of the features other than the stack of hollow plates recited in claim 4. Thus, the Office has not established a *prima facie* case of obviousness with respect to claim 4.

Applicant respectfully notes that MPEP 2143.03 requires the “consideration” of every claim feature in an obviousness determination. To render claim 4 unpatentable, however, the Office must do more than merely “consider” each and every feature of claim 4. Instead, the asserted combination of the patents to Gremel, Oscarsson, and Kunz must also teach or suggest each and every claim feature. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (to establish prima facie obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). A proper obviousness determination **requires** that an Examiner make “a searching comparison of the claimed invention – including all its limitations – with the teaching of the prior art.” See *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis in original).

As the Office has failed to establish a *prima facie* case of obviousness with respect to claim 4, Applicant is under no obligation to submit evidence of nonobviousness. MPEP 2142.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 4. Allowance of claim 4 is respectfully requested.

Failure to Address Pending Claims

Applicant respectfully notes that the Office Action has failed to substantively address pending claims 5 and 6. Accordingly, this Final Office Action is not complete. Applicant respectfully requests that the Office address claims 5 and 6 in the next action.

Finality of Next Action is Improper

Applicant has filed a Request for Continued Examination herewith. As the Office has not yet provided a substantive examination of at least claims 4-6, Applicant respectfully submits that the next Action cannot properly be made final.

Conclusion

Claims 4-6 and 11-12 are currently pending in the application. The Applicant has fully responded to each and every objection and rejection in the Office action dated May 27, 2009 and believes that claims 4-6 and 11-12 are in condition for allowance. The Applicant therefore requests a timely Notice of Allowance be issued in this case.

Applicant believes no other fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 50-4058 as necessary.

If the Examiner should require any additional information or believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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Date

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